

TITLE V PERMIT TO OPERATE  
TOSCO SANTA MARIA REFINERY  
**STAFF REPORT**  
APPLICATION NUMBER 2104

February 26, 1998

## **I. Background**

The federal Clean Act Amendments of 1990 established a nation-wide permit to operate program commonly known as "Title V". This District adopted Rule 216, Federal Part 70 Permits, to implement that program locally and received interim program approval from EPA in December 1995. That interim approval has since been extended until October 1, 1998. The Unocal Corporation applied for a Title V permit to operate the Santa Maria Refinery in June 1996 under the District's program. The Santa Maria Refinery was then purchased from Unocal by Tosco in early 1997. This engineering evaluation is intended to assess the adequacy of that application and to explain the District's approach in composing a propose Title V permit for the Tosco Santa Maria Refinery.

Unocal's application was received on May 13, 1995, which was well before the application deadline of June 1, 1995. A completeness evaluation was performed, see Attachment A, and the application was deemed complete-upon-receipt in the District's letter to Unocal dated June 19, 1996. Several District requests for further information followed and Unocal responded in a timely fashion to all. A major revision to Tosco's Title V application was received on August 27, 1997, in response to the District's draft permit. The Tosco Corporation applied for a transfer of the existing District permits for the refinery and carbon plant on March 17, 1997. In response, most permits were re-issued to Tosco on May 2, 1997.

The District's approach to the Title V program is to issue a single permit for the entire facility which satisfies both the federal requirement for a permit under Rule 216 and the District's requirement for a permit under Rule 202, Permits. All federal, state, and District requirements associated with the emission of air contaminants are intended to be included in that permit. Any document, which is not readily available to the public and is necessary to support an applicable federal requirement, is included as an appendix. The District has taken the approach that all of the following documents are readily available to the public and, therefore, will not be included: Code of Federal Regulations, California Code of Regulations and Health and Safety Code, District Rules and Regulations (both those which are current and those which appear in the California State Implementation Plan), District agreed upon compliance plans not necessary to support an applicable federal requirement (copies of which are available at the refinery and at the District's office), and all test methods (unless specifically included).

The Unocal refinery (now Tosco) and coke calcining plant have traditionally been considered separate sources. This grew from the fact that the coke plant used to be owned by Collier Carbon. Both facilities have the same major category Standard Industrial Classification (SIC) Code of **29** (the full refinery SIC code is 2911 and the full carbon plant SIC code is 2999), are located on contiguous properties, are controlled and operated by the same company, and are intimately supported by one another. Evidence of the latter includes the fact that carbon plant steam is supplied to the refinery, refinery sulfur is shipped from carbon plant property, refinery fuel gas is burned in the carbon plant, and petroleum coke produced at the refinery is processed at the carbon plant. (See District letter dated February 6, 1996.) Consequently, a single Title V permit will be issued for the entire complex.

The District has previously issued separate permits for each process at this facility. The intent was to allow processes to be considered individually for modification or renewal. The refinery was traditionally permitted under the U-3031 designation series and the carbon plant was permitted under the C-1237 series. Many existing compliance plans, procedures, and records refer to the process number assignments of those permits. Consequently, the Title V permit will be issued under the T-3031 designation (with Tosco now being the owner) and all of the previous refinery permit number extensions (A-1, A-2, B-1, etc.) will be used to denote separate processes, except for the carbon plant process units. The latter equipment will receive new process designations in the refinery series to prevent identifier duplication in the Title V permit.

**II. Compliance with Rule 216:** A section-by-section evaluation of compliance with all pertinent requirements of this rule follows. Requirements are listed by rule section and are shown in normal text. This evaluation's comments are shown in **bold text**.

B. Applicability. **Tosco is subject to the requirement to obtain a title V permit because their actual emissions exceed the major sources thresholds: 100 tons per year of a criteria air pollutant: NOx, SO2, VOC, PM; and 10 tons per year of a hazardous air pollutant: HCL. The facility is also subject to the Refinery MACT standard of 40CFR63 subpart CC because of their HCL emissions. In addition, Tosco has stipulated that they are a major source for these pollutants in their application.**

E. Requirements - Application Contents

1. Required Information for a Part 70 Permit. A complete application for a Part 70 permit shall contain all the information necessary for the APCO to determine compliance with all applicable requirements. The information shall, to the extent possible, be submitted on standard application forms available from the District. **The application contained all of the listed information and was deemed complete upon receipt, see Attachment A to this evaluation. The District's standard forms were used.**

5. Certification by Responsible Official. Any Part 70 permit application shall be certified by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **The original application was certified to be true, accurate, and correct by Ronald E. Thompson who was Unocal's responsible official. A major revision by Tosco was certified to be true, accurate, and correct by Paul J. Thorvaldsen who is Tosco's responsible official.**

F. Requirements - Permit Content

1. Each Part 70 permit shall include the following elements:

- Conditions that will assure compliance with all applicable requirements, including conditions establishing emission limitations and standards for all applicable requirements. **All applicable requirements are included in the proposed permit. See section IV of evaluation for Periodic Monitoring discussion.** Where any two or more applicable requirements are mutually

exclusive, the more stringent shall be incorporated as a permit condition and the other(s) shall be referenced. **Several applicable requirements were streamlined, see below, and referenced in the permit.**

- b. The term of the Part 70 permit. **See condition III.A.8.**
- c. Conditions establishing all applicable emissions monitoring and analysis procedures (**see condition III.C.8**), emissions test methods or continuous monitoring equipment required under all applicable requirements (**see condition III.D.6**); and related recordkeeping and reporting requirements (**see condition section III.B**).
  - 2) All applicable records shall be maintained for a period of at least 5 years. **See condition III.B.**
  - 3) All applicable reports shall be submitted every 6 months and shall be certified by a responsible official. **See condition III.B.4.c.**
    - i. All instances of deviations from permit requirements must be clearly identified. **See condition III.B.4.c.3.**
- e. A severability clause to ensure the continued validity of the various Part 70 permit requirements in the event of a challenge to any portions of the Part 70 permit. **See condition III.A.6.**
- f. A statement that the permittee must comply with all conditions of the Part 70 permit. **See condition III.A.2.a.**
- g. A statement that the need for a permittee to halt or reduce activity shall not be a defense in an enforcement action. **See condition III.A.2.b.**
- h. A statement that the Part 70 permit may be modified, revoked, reopened, and reissued, or terminated for cause. **See condition III.A.2.c.**
- i. A statement that the Part 70 permit does not convey any property rights of any sort, or any exclusive privilege. **See condition III.A.2.d.**
- j. A statement that the permittee shall furnish (information) to the permitting authority.... **See condition III.A.2.e.**
- k. A condition requiring the permittee pay fees due to the District consistent with all applicable fee schedules. **See condition III.A.9.**
- l. Applicable conditions for all reasonably anticipated operating scenarios identified by the source in its Part 70 permit application. **Tosco did not request alternative operating scenarios in their application.**
- m. Applicable conditions for allowing trading under a voluntary emission cap accepted by the permittee to the extent that the applicable requirements provide for such trading without a case-by-case approval of each emissions trade. **Tosco did not request an emission cap in their application.**
- n. Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventive measures taken. **See conditions III.A.3 and III.B.3.g.**
- o. For any condition based on a federally-enforceable requirement, references that specify the origin and authority for each condition, and identify any difference in

form as compared to such federally-enforceable requirement. **See convention A.1.**

2. Each Part 70 permit shall include the following compliance requirements:
  - a. A statement that representatives of the District shall be allowed access to the stationary source and all required records. **See condition III.A.5.**
  - b. A schedule of compliance consistent with Subsection L.2. **See condition section III.F.**
  - d. A requirement that the permittee submit compliance certification pursuant to Subsection L.3. **See condition III.B.4.d.1.**
3. Federally-enforceable requirements. All conditions of the Part 70 permit shall be enforceable by the EPA and citizens under the CAA unless the conditions are specifically designated as not being federally-enforceable and, therefore, a District-only requirement. **See condition III.A.2.i.**

G. Requirements - Operational Flexibility

2. Alternative Operating Scenarios. The owner or operator of any stationary source required to obtain a Part 70 permit may submit a description of all reasonably anticipated operating scenarios for the stationary source as part of the Part 70 permit application. **Tosco did not request alternative operating scenarios in their application.**

H. Requirements - Timeframes For Applications, Review, And Reissuance

1. Significant Part 70 Permit Actions
  - a. Timely Submission of Applications. Any stationary source required to obtain a Part 70 permit pursuant to Section B shall submit an application for such permit in the following manner:
    - 1) For any stationary source that is required to obtain a Part 70 permit pursuant to Section B on the effective date of this rule, an application for a Part 70 permit shall be submitted to the District no later than six (6) months after the effective date of this rule. **A complete application was received on May 19, 1996, which was prior to the deadline of June 1, 1996.**
  - b. Completeness Determinations. The APCO shall provide written notice to an applicant regarding whether or not a Part 70 permit application is complete. **Unocal was notified on June 19, 1996, that their application was complete.**
  - c. Action on Applications. The APCO shall take final action on each complete Part 70 permit application as follows:
    - 1) For applications for a Part 70 permit that are submitted pursuant to Subsection H.1.a.1 the APCO shall take final action:
      - i. On at least one third of all such applications by no later than one year after the effective date of this rule; **Three applications were filed and Tosco's will be the second to be issued. This should occur approximately 27 months after Rule 216's effective date of December 1, 1995.**



- I. Requirements - Permit Term and Permit Reissuance
  - 1. All Part 70 permits shall be issued for a fixed term of 5 years from the date of issuance of the permit by the District. **See condition III.A.8.**
- J. Requirements - Notification
  - 1. Public Notification
    - a. The APCO shall publish a notice, as specified in Subsection J.1.b, of any preliminary decision to grant a Part 70 permit, if such granting would constitute a significant Part 70 permit action. **Done**
    - b. Any notice of a preliminary decision required to be published pursuant to Subsection J.1.a shall:
      - 1) Be published in at least one (1) newspaper of general circulation in San Luis Obispo County, by no later than ten (10) calendar days after such preliminary decision. **Notice published on October 24, 1997, in the Telegram Tribune which is a newspaper of general circulation in the District.**
      - 2) Be provided to all persons on the Part 70 permit action notification list. This list shall include any persons that request to be on such list. **No one has requested to be included on a Part 70 notification list.**
      - 3) Include the following:
        - i. Information that identifies the source, and the name and address of the source.
        - ii. A brief description of the activity or activities involved in the Part 70 permit action.
        - iii. A brief description of any change in emissions involved in any significant Part 70 permit modification. **See Attachment G for text of public notice.**
      - 4) Include the location where the public may inspect the information required to be made available pursuant to Subsection J.1.c. **see Attachment G**
      - 5) Provide at least 30 calendar days from the date of publication for the public to submit written comments regarding such preliminary decision. **see Attachment G**
      - 6) Provide a brief description of comment procedures including procedures by which the public may request a public hearing, if a hearing has not been scheduled. The APCO shall provide notice of any public hearing scheduled pursuant to this subsection at least 30 calendar days prior to such hearing. **see Attachment G**
    - c. The APCO shall, by no later than the date of publication, make available for public inspection at the District office the information submitted by the applicant and the APCO's supporting analysis for any preliminary decision subject to the notification requirements of Subsection J.1.a. **Done**
    - d. The APCO shall maintain records of the those who comment and issues raised during the public participation process. **no comments to date**

- e. The APCO shall only consider comments regarding a preliminary decision to grant a Part 70 permit if the comments are germane to the applicable requirements implicated by the permit action in question. Comments will only be germane if they address whether the permit action in question is consistent with applicable requirements, requirements of this rule, or requirements of 40 CFR Part 70. In addition, comments that address a portion of a Part 70 permit that would not be affected by the permit action in question would not be germane. **no comments to date**
- K. Requirements - Reopening of Permits
  - 1. Reopening of Part 70 Permits for Cause. Each issued Part 70 permit shall include provisions specifying the conditions under which the permit will be reopened prior to the expiration of the permit. **See condition III.A.2.c.**
- L. Requirements - Compliance Provisions
  - 1. Permit Required and Application Shield. No stationary source required to obtain a Part 70 permit shall operate after the date it is required to submit a timely and complete permit application except in compliance with its Part 70 permit or under one of the following conditions:
    - a. When a timely and complete Part 70 permit application has been submitted, the stationary source may continue to operate until the Part 70 permit is either issued or denied. This provision does not allow the stationary source to operate in violation of any applicable requirement. **A complete and timely application for the initial Title V permit was submitted on May 19, 1996.**
  - 2. Compliance Plans. A compliance plan must be submitted with any Part 70 permit application. The compliance plan shall contain all of the following information: **See application section 5.0.**
    - a. A description of the compliance status of the source with respect to all federally-enforceable requirements.
    - b. For federally-enforceable requirements with which the source complies, the plan must state that the source will continue to comply.
    - c. For federally-enforceable requirements that will become effective during the Part 70 permit term, the plan must state that the source will comply with such requirements in a timely manner.
      - 1) A detailed schedule shall be included for compliance with any federally-enforceable requirement that includes a series of actions.
  - 3. Compliance Certification. All permittees and applicants must submit certification of compliance with all applicable requirements and all Part 70 permit conditions. A compliance certification shall be submitted with any Part 70 permit application and annually, on the anniversary date of the Part 70 permit, or on a more frequent schedule if required by an applicable requirement or permit condition. **The application contained a compliance certification and the annual requirement appears in condition III.b.4.d.1.**
  - 4. Document Certification. Any Part 70 permit application and any document, including reports, schedule of compliance progress reports and compliance



certifications, required by a Part 70 permit shall be certified by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **The application contained a document certification and the on-going requirements appear in conditions III.B.4.b,c,&d.**

6. Permit Shield

- a. Compliance with all of the conditions of a Part 70 permit shall be deemed compliance with any applicable requirements as of the date of issuance of the Part 70 permit, provided that the Part 70 permit application specifically requests such protection and one of the following conditions is satisfied:
  - 1) Such applicable requirements are included and specifically identified in the Part 70 permit, **See condition section III.G.**

**III. Streamlining of Applicable Requirements:** The following federally-enforceable limits are encompassed as subordinate to District-only requirements. This subordination is termed "subsumed" by EPA. This streamlining of requirements is intended to follow the guidance provided in section II.A.2.d, second bullet, of EPA's White Paper Two, dated March 5, 1996. The subsumed requirements appear in the Permit Shield section of this permit. Through this streamlining action, applicable requirements which were previously District-only requirements become federally-enforceable if any subsumed requirement is federally-enforceable.

Streamlining selects the most stringent emission limitation or work practice standard. The respective recordkeeping, reporting, and monitoring (RRM) requirements associated with that limitation or standard are presumed to be adequate to show compliance. This procedure is in accordance with section II.A.2.e of White Paper Two. In the spirit of that guidance, it is not the intent of this evaluation to "cherry-pick" among the RRM requirements to apply the most stringent RRM among the subsumed requirements.

1. Storage tanks. SIP Rule 407 only applies to petroleum product tanks with a TVP of  $\geq 1.5$  psia and infers that "gasoline" and "petroleum distillates" are example products. The refinery ships pressure distillate and gas oil as intermediate products for further refinement elsewhere. Both materials are obtained by distillation but the gas oil has a TVP of  $< 1.5$  psia. The pressure distillate has traditionally been considered (and will still be considered) subject to SIP Rule 407. Slop oil (or recovered oil) is reprocessed in the refinery, crude oil is a raw material, and gas oil has a low vapor pressure so these three materials have traditionally not been considered (and will continue to not be considered) subject to SIP Rule 407. This means that Tanks 100 & 101 (slop oil); 800 & 801 (gas oil); and 900, 901, & 903 (crude oil) are not subject to those requirements and that Tanks 550 & 551 (pressure distillate) are subject.

### Storage tank applicable requirements matrix

tank	type	mtr'l	206	SIP 407	425	Kb	CC	strmln	D-only	fed-enf
									either - or	
100/1	dome	slop oil			E.3				X	
550/1	dome	PD		A.2	<b>E.3</b>			X		X
800/1	single	gas oil	X						X	
900/1	double	crude			E.1				X	
903	double	crude			<b>E.1</b>	X		X		X

- a. Tanks 550 & 551, process A-1, are required by federally-enforceable SIP Rule 407.A.2 to employ a vapor recover system which is capable of preventing the release of vapors to the atmosphere. This requirement will be subsumed by the District Rule 425.E.3 requirement to employ a vapor recovery system which vents to the refinery's fuel gas system as indicated in condition II.B.1.d. A second requirement of SIP Rule 407.A.2 requires that all gauging and sampling ports be maintained gas-tight. This requirement will be subsumed by the Rule 425.E.3.a requirement to maintain those ports tightly closed and gas-tight as indicated in condition III.C.6.b.
- b. Tank 903, process A-1, is subject to federally-enforceable 40CFR60, subpart Kb, and required to employ a floating roof with double seals. It was also initially considered subject to the MACT standard (subpart CC) by Tosco in their original compliance plan. Upon further review, this evaluation is in agreement with Tosco that this tank is not subject to the MACT because it does not contain >4% HAP compounds. Tanks 900 and 901, process A-1, were similarly considered subject to the MACT initially. This evaluation is in agreement with Tosco that these tanks are, indeed, not subject to those requirements for the lack of >4% HAPs. The subpart Kb requirements for tank 903 will be subsumed by the Rule 425.E.1 requirement to employ double seals as indicated in condition III.E.1.b.1.i.
  - 1) The primary seal gap requirement of Rule 425 is more stringent than section 60.113b.b.4.i which limits gaps to no more than 1½ inch with the total area not to exceed **10 in<sup>2</sup>/ft** of circumference. The following equation states the Rule 425 limits, as they appear in condition III.E.1.a.1&2, in those same units:

Rule 425 allowed primary seal gap = (1.5 inch max and not to exceed 10% of circ.)  
+ (½ inch not to exceed 40% of circ.) + (⅓ inch for the remainder)

$$(1.5\text{in} \times 12\text{in}/\text{ft} \times 0.1) + (0.5\text{in} \times 12\text{in}/\text{ft} \times 0.4) + (0.125\text{in} \times 12\text{in}/\text{ft} \times 0.5) = \mathbf{4.95 \text{ in}^2/\text{ft}}$$

- 2) The zero gap secondary seal requirement of Rule 425 (which Tanks 900, 901, and 903 are subject to) is more stringent than 40CFR60, subpart Kb, which limits gaps to no more than ½ inch with the total area not to exceed **1.0 in<sup>2</sup>/ft** of circumference. Assuming welded shells are constructed with 5 weld seams per 100 foot of tank diameter and the Rule 425 gap allowance is further restricted to ½ inch, the following equation states the Rule 425 limit, as it appears in condition III.E.1.a.4, in Subparts Kb units:

Rule 425 allowed secondary seal gap = (½ inch not to exceed 4 inches per weld seam) \* (5 seams per 100 foot of circumference)

$$(0.5 \text{ in} * 4 \text{ in/seam}) * (5 \text{ seams}/100 \text{ ft}) = \mathbf{0.1 \text{ in}^2/\text{ft}}$$

- 3) The floating roof appurtenance design requirements of Rule 425.F are considered “work practice requirements” as described in section II.A.2.b of White Paper Two. With the exception of section 425.F.7.b, all of those requirements are considered as not supporting the seal gap requirements discussed above and, therefore, will remain as District-only requirements. The 425.F.7.b primary shoe gap limit of 3 inches will be considered as supporting the seal gap requirements and will be considered federally-enforceable as indicated in condition III.E.1.a.3.
- 4) The floating roof with double seal requirements of 40CFR60.112b.a.2 (Tank 903) and 425.E.1 are considered “work practice requirements” as described in section II.A.2.b of White Paper Two. They will be considered as supporting the seal gap requirements and will be considered federally-enforceable as indicated in condition III.E.1.b.1.i.
- 5) The work practice requirements in 40CFR60.113b.b.4.i specifies that primary seal mechanical shoes extend into the stored liquid, that those shoes also extend a given distance above the liquid surface, and that there be no holes, tears, or other openings in the primary shoe or the primary and secondary seal fabric or seal envelope. The fact that a seal shoe must be designed and installed to extend a given distance above and below the stored liquid surface has no bearing on the gap that results between that seal and the tank wall. The zero tolerance, "no hole or opening", requirement is quite incompatible with the concept of an allowed gap and, therefore, also has no bearing on the gap criteria. Consequently, the New Source Performance Standard (NSPS) requirements will not be considered as supporting Tank 903's seal gap requirements and will not be included as federally-enforceable requirements.
- 6) The work practice requirements in 40CFR60.112b.a.2.iii that the floating roof not be allowed to rest on its support legs, except during specific situations, and that liquid transfers be continuous, will not be considered as supporting the seal gap requirements for Tank 903. Consequently, the corresponding Rule 425.E.1 and

C.3.b requirements in conditions III.E.1.b.3 and 4 respectively will be applied as "District-only".

- 7) The work practice requirement in 40CFR60.112b.a.2.ii that the slotted guide pole be fitted with a seal was the subject of a Consent Decree issued by a federal court (USA vs. Unocal, civil #95-3980, DOJ #90-5-2-1-2002). The refinery complied with that requirement with the installation of a "green sleeve" which eliminates any gaps in or around the pole. Consequently, the corresponding requirement in this permit under condition III.E.1.b.1.iv will be considered federally enforceable for Tank 903. In addition, condition III.E.1.b.1.v will be clarified that no gap is allowed at Tank 903's guide pole.
- c. The inspection frequencies for Tank 903 associated with District Rule 425 are as, or more, stringent than those in 40CFR60 subpart Kb with the following exceptions:
- 1) Rule 425.G.7.b allowance for inspection of the primary seal every ten years when a zero-gap secondary is used (Tanks 900, 901, and 903 have zero-gap secondary seals). However, Rule 425.G.6 also calls for the primary seal to be inspected annually at four locations as selected by the APCO. Inspection sites are selected on the basis of a perceived possibility of primary seal gaps. 40CFR60.113b.b.1.i requires that the primary seal be inspected every five years. Due to the wear and tear caused by the inspection of a primary seal below a zero gap secondary seal, the combination of the less frequent Rule 425 full seal monitoring requirement and the more frequent Rule 425 spot check monitoring is judged to assure compliance to the same extent as the subsumed subpart Kb monitoring frequency. Consequently, in accordance with section II.A.2.e of White Paper Two, the subpart Kb monitoring requirements will not be considered to apply.
  - 2) 40CFR60.113b.b.1.i requires that the primary seal be inspected during hydrostatic testing or within 60 days of initial filling with a volatile organic liquid. Subsection 113b.b.6 also calls for an inspection whenever a tank is emptied and degassed. Whether or not these work practice requirements are considered to directly support the NSPS gap criteria was a point of discussion between EPA and District staff. EPA pointed to the first bullet of section II.A.2.b to White Paper Two which states,

"A work practice requirement directly supporting an emission limit (i.e., applying to the same emission point(s) covered by the emission limit) is considered inseparable from the emission limit..."

EPA felt that the NSPS seal inspections fit this definition because a seal gap is the emission point of concern and the inspection would be for the purposes of measuring that gap. The consequence of considering the gap criteria and inspections to be inseparable is to make federally-enforceable any similar inspections

performed under an otherwise District-only requirement. The District's contention was that the second bullet to the same White Paper section tends to indicate that inspections, per se, are not considered a work practice requirement that directly support an emission limit. The pertinent wording there is as follows:

"Similar work practice requirements which apply to the same emissions or emissions point but which do not directly support an emission limit may be streamlined.... The streamlined work practice requirement may be composed of provisions/elements (e.g., frequency of inspection, recordkeeping)..."

The root of this discussion is at the heart of streamlining. Which requirements should be subsumed as not supporting an emission limits and which requirements should not be subsumed is a key streamlining question. In this particular instance, the District is willing to concede the point to EPA because the White Paper guidance is not clear enough. Consequently, the following requirements will be held as federally-enforceable under Rule 206 and the District's ability to place permit conditions for Tank 903. The corresponding NSPS sections will be included in the Permit Shield because subpart Kb will not apply except as a subsumed requirement.

- i. Condition III.C.4.h requires that a tank's fittings and seals be inspected whenever the tank is emptied and degassed.
  - ii. Condition III.C.4.i requires that a tank's seals be inspected whenever the roof is refloated.
- d. The inspection technique requirements of 40CFR60.113b.b.2 apply to Tank 903 and contain specific seal gap measuring rod dimensions and usage procedures. The standard District practice is to inspect seals using appropriately sized measuring rods and in a similar manner as described in subpart Kb. These inspection techniques go hand-in-hand with the inspection frequencies discussed in item III.2.c.2 above. Consequently, they too will be considered federally enforceable for Tank 903 and included in the Permit Shield. See condition III.C.4.j.
2. Tail Gas Unit. This unit is subject to 40CFR60 subpart J. Two of the federal limits, 300 ppm TRS and 10 ppm H<sub>2</sub>S, were included in previous permit conditions and need not be streamlined. When the tail gas combustor is on, however, the District's 100 ppm SO<sub>2</sub> limit is more stringent than the federal limit of 250 ppm. Both limits are corrected to 0% O<sub>2</sub>. Consequently, in accordance with section II.A.1.e of White Paper Two, the subpart J requirement will be subsumed to the District requirement.
3. B-506 boiler. This unit is subject to both Rule 430 and 40CFR60 subpart Db. The respective NO<sub>x</sub> emission limits are 0.036 lb/mmBtu and 0.2 lb/mmBtu. The latter limit is

based on a high heat release rate of 127 mmBtuh/ 1448 ft<sup>3</sup> = 87,707 Btu/h/ft<sup>3</sup>. The Rule 430 limit is more stringent, therefore the requirements of subpart Db will be subsumed.

The subpart Db monitoring requirement calls for either a CEM (60.48b.b) or a predictive NO<sub>x</sub> emission program (60.48b.g.2). The latter calls for the monitoring of an operating parameter, on an hourly basis, that ensures compliance (60.49b.c.3). The continuous fuel usage and steam flow monitoring requirements of conditions III.B.1.c & d, the annual calibration of those monitors required by condition III.B.2.h, and the annual testing required by condition III.D.1 are judged to assure compliance to the same extent as the predictive NO<sub>x</sub> emission plan of subpart Db. Consequently, and in accordance with section II.A.1.e of White Paper Two, the subpart Db monitoring requirements, with the exception of 60.49b.c.3, will not be considered to apply. This latter section, which requires hourly monitoring, is judged to already exist and will continue to exist under condition III.B.1.c. Therefore, in keeping with footnote 12 to section II.A.2.e of White Paper Two which requires that all existing monitoring be retained, 40CFR60.49b.c.3 will be cited as requiring the recordkeeping of condition III.B.1.c for the B-506 boiler.

Note that 40CFR40b.c defers to 40CFR60 subpart J for any B-506 SO<sub>x</sub> requirements.

**IV. Periodic Monitoring.** If it is deemed necessary, the permit should include periodic monitoring conditions, to ensure compliance with all applicable federal requirements (reference Rule 216.F.1.a). Most NSPS or NESHAP requirements already contain provisions for periodic monitoring and need no further discussion. This section of the evaluation will discuss requirements which do not contain explicit monitoring.

1. SIP Rule 401, Visible Emissions (condition III.A.1.a). This rule limits emissions to 40% opacity. If warranted, periodic monitoring could be accomplished through in-stack opacity monitors or visible emission evaluations by certified observers. Tosco's heaters and boilers are fueled by a relatively high energy value gas (1200 Btu/scf), which is a mixture of refinery make gas (RMG) and natural gas. Any visible emissions that might occur would result from incomplete combustion. A combustion efficiency analysis of the 1997 compliance testing performed at the refinery can be found in attachment C. All units achieved at least 99% efficiency and most achieved 99.9%. This is not unexpected because nearly all boilers and heaters now use new, lo-nox burners in response to District Rule 430, Control of NO<sub>x</sub> from Industrial Boilers and Process Heaters. Consequently, no visible emissions are expected to occur from these units and no periodic monitoring is proposed.
2. SIP Rule 111, Nuisance (condition III.A.1.b). This rule prohibits the causing of a public nuisance. This rule stems from a similar regulation in the California Health and Safety Code and there is no corresponding federal requirement. While it currently appears in the SIP, it doesn't belong there. Reference EPA's letter of August 18, 1994 (see attachment D), in which one of the types of rules not to be included in the SIP are, "(5) any other purely administrative or procedural regulation not related to the control of criteria pollutants." SIP

Rule 111 is intended to prevent nuisance situations which are more commonly caused by odorous compounds. It is not intended to control criteria air contaminants. Therefore, this rule will not be included as a federally enforceable requirement in this permit. Rather, its present day counterpart in District Rule 402 will be included as a District-only requirement.

As a side note, the District's Hearing Board served the refinery with a conditional order of abatement for odorous emissions in violation of this rule in 1989. Significant improvements were installed under Unocal's Improvement and Modernization project to reduce those emissions and the order of abatement was lifted. Since those changes were made, the refinery has only been found in violation of Rule 402 once and that was due to odors from the coke cooling water storage tanks in 1994. Improvements to the tank surface skimmers and process changes to minimize floating oil in those tanks have proved adequate to ensure that the tanks operate in compliance with the nuisance rule. Consequently, the refinery is not expected to create a nuisance through normal operations and is considered in compliance with Rule 402 at this time.

3. SIP Rule 113, Particulate Matter (condition III.A.1.c). This rule limits emissions to 0.3 gr/dscf and sliding scale amounts in lb/hr depending on process rate. If warranted, periodic monitoring could be accomplished through stack sampling. Combustion devices are not likely to exceed either the concentration or mass emission limits of this rule for the same reason of their high combustion efficiency as noted above for SIP Rule 401. Three stacks at the carbon plant have the potential for exceeding this limit under normal operation and all have a periodic stack testing requirement: cold stack, cooler stack, and rail car loading baghouse. All other particulate matter sources are fugitive in nature and cannot be tested. Consequently, no additional periodic monitoring is proposed.
4. SIP Rule 114.1, Sulfur Dioxide (condition III.A.1.d.1). This rule limits emissions to 0.2% as sulfur dioxide. If warranted, periodic monitoring could be accomplished through in-stack continuous emissions monitoring, continuous or periodic fuel sulfur content monitoring, or stack sampling. The B-602 sulfur recovery unit incinerators are exempt from this requirement. All of the refinery's heaters and boilers are subject to the rather stringent limitations of NSPS, subpart J, and a continuous monitoring system, AN-603, ensures compliance by monitoring the refinery fuel gas. Weekly fuel samples are analyzed for total sulfur as well. H<sub>2</sub>S is a good indicator of the total sulfur content of the gas due to the nature of the sulfur removal processes involved. Periodic source tests of individual stacks are also performed. Although, the carbon plant cold stack has violated the 2000 ppm standard as recently as July 1995, the compliance plan contained in Appendix A to the proposed permit resulted from that incident. The coke feed rate required to ensure compliance with that plan is monitored under condition III.B.1.h. In addition, the cold stack is tested for compliance annually. Consequently, no additional periodic monitoring is proposed.
5. SIP Rule 404.B, Sulfur Content of Fuels (condition III.A.1.d.2&3). This rule limits the sulfur content of gaseous fuels to 50 gr/100 dscf and liquid fuels to 0.5%. If warranted, periodic

monitoring could be accomplished through continuous or periodic fuel sampling for sulfur content. As mentioned above, the refinery's fuel gas is continuously monitored for H<sub>2</sub>S and weekly samples are drawn for total sulfur analysis. The fuel gas also undergoes independent analysis annually. Very little liquid fuel is burned on site and the 0.5% sulfur content requirement is so standard through-out California that it is extremely unlikely that fuel which exceeds that level could even be purchased. Consequently, no additional periodic monitoring is proposed.

6. SIP Rule 406, Carbon Monoxide (condition III.A.1.e). This rule limits emissions to 2000 ppm. If warranted, periodic monitoring could be accomplished through in-stack monitors or stack testing. Internal combustion engines are not subject to this standard. As mentioned earlier, all of the refinery's boilers and heaters have extremely high combustion efficiency. As can be seen from the 'CO ppm' data in the efficiency calculation in attachment C, none of these units even approach the 2000 ppm standard. Testing for carbon monoxide emissions occurs annually. Consequently, no additional periodic monitoring is proposed.
7. SIP Rule 407.H.2, Metal Surface Coating Thinners and Reducers (condition III.A.1.f). This rule prohibits thinning with photochemically reactive solvents. If warranted, periodic monitoring could be accomplished either through recordkeeping of the coatings and thinners used and their material data safety sheets (MSDS) or laboratory testing of each thinners mixed with metal part coatings. Condition III.B.1.v to the permit will require recordkeeping sufficient to show that non-photochemically reactive thinners and reducers are used by both Tosco and their contractors for metal surface coatings. Note that condition III.A.2.k, which limits the applicability of the permit to the refinery and carbon plant properties, is intended to satisfy any concerns that Tosco might be liable for coatings applied off-site by contractors.
8. SIP Rule 407.H.3, Architectural Coatings (condition III.A.1.g). This rule prohibits the use of architectural coatings, sold in quart containers or larger, which contain photochemically reactive solvents. It also does not allow the thinning or reducing of those coatings with photochemically reactive solvents. If warranted, periodic monitoring would be same as under item 7 above. Condition III.B.1.w to the permit will require recordkeeping sufficient to show that non-photochemically reactive solvents, thinners, and reducers are used by both Tosco and their contractors for architectural coatings.
9. SIP Rule 407.H.4, Disposal and Evaporation of Solvents (condition III.A.1.h). This rule prohibits the evaporation of any more than 1½ gallons of photochemically reactive solvent during disposal. This type of emission might be characterized by allowing open paint cans to dry out prior to disposal so that the can and its contents do not have to be treated as a hazardous waste. If warranted, periodic monitoring could be accomplished through testing of waste solvent content before and after disposal. Tosco should not allow any solvents to evaporate during disposal, whether those solvents are photochemically reactive or not. Condition III.A.1.h prohibits any evaporation of solvents during disposal. Analysis of waste



before and after disposal would be extremely expensive and is not warranted. Consequently, no periodic monitoring is proposed.

10. SIP Rule 422, Refinery Process Turnarounds (condition III.A.1.i). This rule prohibits depressurizing refinery vessels to the atmosphere. If warranted, periodic monitoring could be accomplished through operational and physical verification that all depressurizations occur to the relief and recovery system. Depressurization to the make gas system is standard practice at the refinery and can be verified through a review of Tosco's standard operating procedures manual. Consequently, no additional periodic monitoring is proposed.
11. SIP Rule 407.C.1.a, Submerged Fill Pipes (condition III.A.1.p). This rule prohibits the filling of any 250 gallon or larger gasoline storage tank without the use of a submerged fill pipe. If warranted, periodic monitoring could be accomplished by inspecting each gasoline storage tank's fill pipe prior to filling it. All gasoline storage tanks at Tosco have been inspected at one time or another and had the presence of a submerged fill pipe verified. Consequently, no periodic monitoring is proposed.
12. SIP Rule 424.B.5, Phase I Vapor Recovery (condition III.A.1.q). This rule requires the use of good operating practices when transferring gasoline into a storage tank. If warranted, periodic monitoring could be accomplished through independent observation of each gasoline transfer. Contractor filling of gasoline storage tanks are already required to use good operating practices by Tosco's safety department. Consequently, no periodic monitoring is proposed.
13. SIP Rule 416, Degreasing Operations (condition III.A.1.r). This rule has certain equipment requirements and requires the use of good operating practices when using cold solvent degreasers. If warranted, periodic monitoring could be accomplished through independent observation of each degreasing operation. None of this equipment in use at the refinery is significant enough to require a District permit and the equipment's use is already adequately monitored by Tosco's safety department. Consequently, no periodic monitoring is proposed.
14. SIP Rule 501.A, Open Burning (condition III.A.1.s). This rule prohibits the burning of outdoor open fires except for fire fighting training purposes. If warranted, periodic monitoring could be accomplished by independent observation of the refinery as a whole. Tosco has consistently sought and obtained permission for fire fighting training burns and has never been known or found to have lit open outdoor fires for any other reason. Based on such a good track record of compliance, no periodic monitoring is proposed.
15. There is a NO<sub>x</sub> emission limitation for the B-506 boiler that stems from NSPS subpart Db (condition I.A.1). This unit is source tested annually and employs an oxygen sensor which is monitored by the operators using the Distributed Control System (DCS). If warranted, periodic monitoring could also include in-stack continuous emissions monitors. The oxygen concentration in the stack of any given unit is an excellent surrogate for NO<sub>x</sub> emissions

because stack O<sub>2</sub> directly affects flame temperature and excess air which the formation of NO<sub>x</sub> is directly dependent upon. Operational procedures ensure that boiler O<sub>2</sub> is consistently and tightly controlled to the same level found during the annual compliance testing. Consequently, compliance with the stack NO<sub>x</sub> limitation can be inferred on a continuous basis at the operator's panel and, therefore, no additional periodic monitoring is proposed.

## **V. Specific Evaluation Notes**

1. Standard conditions for generally applicable requirements do not list those processes to which they apply as allowed by EPA's White Paper One, page 11, section 4, last sentence of paragraph 2.
2. Minor New Source Review (NSR). All existing permit conditions, which are based on previous authority to construct conditions, are considered applicable federal requirements because those preconstruction review actions resulted from SIP Rule 201, Permits. EPA's White Paper One provides guidance on which of those conditions should be carried forward into the Title V permit as federally-enforceable requirements and which may revert to District-only requirements. Specifically, in the fourth paragraph of section II.B.7 to the White Paper, conditions based on the following should be included as federally-enforceable:
  - federal NSR (not applicable to this District)
  - New Source Performance Standards (NSPS)
  - prohibitory rules approved into the SIP
  - avoid an otherwise applicable federal requirement (e.g., Prevention of Significant Deterioration)

Should an existing permit condition not meet any of these profiles, the District is granted the discretion under the White Paper to consider them District-only. The term "overriding federal requirement" will be used in this evaluation to describe the federally-enforceable programs listed above.

EPA Region IX took exception at this method of approach in the area of proposed conditions which are based on previously issued authorities to construct. Where the District believes these to be District-only requirements, EPA feels they are federally-enforceable requirements (see EPA correspondence dated January 9 and February 19, 1998). The disputed conditions are flagged as being "under review" in the proposed permit, as allowed under the next to last paragraph of section II.B.7 to White Paper One. Where the District interprets the White Paper to allowed these conditions to be applied as District-only until the dispute is resolved, EPA contends that they must be federally-enforceable until their status is determined. The proposed permit applies the conditions as federally-enforceable and places a time limit of April 1, 2003 (the date of the next permit renewal), for final resolution.

Several of the conditions identified by EPA in their February 19 letter were not entirely based on previously applied authority to construct conditions. See the attachment to the permit transmittal letter to EPA for the qualifications offered toward their analysis. Also, to substantiate the District's view, when these conditions are analyzed or referred in this evaluation, they be considered District-only (e.g., the emission limits in item V.7 below).

See attachment F for a copy of the current permits to operate and their historical authorities to construct. These were used to form up attachment E which lists all existing permit conditions. For those that are based on requirements placed through an authority to construct, the date of the authority to construct, the unit affected, and whether or not the Title V requirement will be considered federally-enforceable or not, and why, are also included. Finally, this table offers a cross reference to each corresponding Title V permit condition. In the way of explanation for how the federal-enforceability decisions were made:

- If an existing permit condition did not result from an authority to construct and is not based on an overriding federal requirement, it will not be federally-enforceable in the Title V permit.
  - If an existing permit condition did not result from an authority to construct but is felt to either be based on an overriding federal requirement or supports a federally-enforceable requirement, it will be considered federally-enforceable. A reason for that decision will be noted in the far right hand column of the table.
  - If an existing permit condition did result from an authority to construct but has no corresponding overriding federal requirement, it will not be federally-enforceable. A reason for that decision will be noted in the table. A reason of "under review" is given and the condition applied as federally-enforceable for those requirements identified as being under dispute in EPA's letter of February 19.
  - If an existing permit condition did result from an authority to construct and is based on an overriding federal requirement, it will be considered federally-enforceable. No reason for that decision is either needed or offered.
3. Unocal has indicated that all air conditioning work is done by others or is done offsite (Ed Brueninger, telecon on March 4, 1997). Title VI does not apply.
  4. The refinery complex is exempt from Rule 417 under subsection C.4. Consequently, no reference is made to that rule as an applicable requirement.
  5. A review of the Platform Irene modification applications showed that BACT for SO<sub>2</sub> was not triggered because of the emission decrease that resulted. Consequently, the SO<sub>2</sub> limits were placed pursuant to Rule 206 rather than Rule 204.

6. The tail gas unit's 65 ppm and 383.5 lb/wk total reduced sulfur (TRS) limits in condition I.A.12 ensure emissions of less than 10 tpy. EPA's Prevention of Significant Deterioration (PSD) requirements were not triggered when this unit was newly installed in 1986 based on the operator's claim that it would not emit more than 10 tpy TRS. Thus, these limits were voluntarily taken to avoid PSD requirements. Consequently, both of these limits will be considered federally-enforceable.
7. The 100 lb-SO<sub>2</sub>/day, 154 ppm-CO, and 30 ppm-VOC limits on the B505 boiler are based on the District-only offsets provided for this project and there are no overriding federal requirements. Consequently, they will be considered District-only limits.
8. All emission and operational limits associated with the gas oil loading rack, process H, should be considered District-only because there are no overriding federal requirements. Note that the temperature and vapor pressure limitations for Tank 802 were not an applicable federal requirement to begin with because they were not applied through an authority to construct.
9. All operational limits associated with the sulfur pelletizing plant, process U, are considered District-only because there is no overriding federal requirement for this process. This plant was permitted as a grandfathered source and did not go through an authority to construct process.
10. The 15 g/l VOC content limit associated with the cooling tower, process B-2, is considered District-only because there is no overriding federal requirement for VOC emissions from this process and because the VOC limit equates to a potential to emit of only 0.7 lb/day (see attachment C). In light of Rule 201's exemption level of two pounds per day, the cooling tower emissions should be considered negligible. This unit was permitted as a grandfathered source and did not go through an authority to construct process.
11. The triethylene glycol (TEG) recharge limit on the calciner preheater, process R-1, should be considered District-only because there is no overriding federal requirement for this process.
12. The energy input limits for the crude heaters are designed to reflect the burner ratings prior to the installation of low-nox burners to comply with Rule 430. These limits ensure no net emissions increase from the new burners, which are actually capable of a higher firing rate than those burners they replaced. There is no overriding federal requirement for these limits and, therefore, they will be applied as District-only requirements.
13. The refinery crude oil and calciner throughput limits were placed to reflect the operating capability of those plants. There is no overriding federal requirement for these limits and, therefore, they will be applied as District-only requirements.

14. The calciner, cold-side multiclone and hot-side baghouse pressure drops, processes R-2 and R-3 respectively, should be considered District-only because there are no overriding federal requirement for these processes.
15. The requirement to minimize floating oil in the coke cooling water storage tanks is considered District-only because there is no overriding federal requirement to do so. These tanks store water and are open to the atmosphere (no floating or fixed roof) to allow natural cooling. Due to the nature of the process, small amounts of oil is introduced to the tanks with the cooling water, at certain times. The oil is removed by manually positioned surface skimmers. At one time, the floating oil in these tanks was determined to have resulted in a public nuisance. Since then, the skimmers have been improved and process changes have resulted in much less oil entering the tanks. An odor study has been performed on the emissions from these tanks and the conclusion drawn that they no longer have the potential to create a nuisance under normal operations. Consequently, the limitations on floating oil and all associated recordkeeping and reporting will be applied as District-only requirements.
16. The tank seal maintenance program for storm water storage Tanks 822 and 823 in the oily water treatment system is considered District-only because there is no overriding federal requirement. These tanks are not subject to NSPS subparts Ka or QQQ. Consequently, this maintenance program and all associated recordkeeping and reporting requirements will be applied as District-only requirements.
17. The quarterly air sweep flow determinations for the sulfur pit vent system are considered environmentally insignificant because there is no overriding federal requirement for this testing. Consequently, this testing and all associated recordkeeping and reporting requirements will be applied as District-only requirements.
18. Condition III.B.4.f, excess seal gap repair reporting, was left in as a District-only requirement because U-3031-A-1 contained this requirement. The subpart Kb requirement to do this for TK 903 does not apply because it is subsumed under R425.

19. Compliance with 40CFR general provisions.

General Provision		Condition
60.7.a.4	change notification	III.C.7.a.1
60.7.b	start-up, shutdown, & maintenance (SSM) recording	III.C.7.a.2 (common NSPS)
60.7.c	excess emis report	III.B.4.c.2
60.7.f	records	III.C.7.a.1
60.11.d	good operating practices	III.C.7.b
60.12,61.19, 63.4.b	circumvention	III.A.7
60.13.c	CMS periodic audit	III.D.2
60.13.d	CMS zero and span checks	III.B.2.b.1
60.13.e	CMS operation	III.A.9.b/III.E.15.a
60.18	flare operation	III.E.19.d
61.05.c	operate in compliance	III.A.1.p/q
61.05.d	submit reports	III.A.1.p/q.1
61.10.c	changes to initial notification	III.A.1.p/q.2
61.12.c	good operating practice	III.A.1.p/q.3
63.2.c.1/63.4.a.1/63.4.a.3/63.4.a.5	operate in compliance	III.F.2
63.4.a.2	submit reports	III.F.2.d.1
63.6.e.1.i	good operating practice	III.F.2.d.2
63.6.e.1.ii	correct malfunctions as soon as practicable	III.F.2.c.3
63.6.e.3	startup,shutdown,malfunction plan	III.F.2.c
63.10.a.4.ii	copies of reports to EPA	III.F.2.d.4
63.10.b.2	records during SSM	III.F.2.c.4
63.10.d.5.i/ii	reports	III.F.2.c.7/8

20. The following NO<sub>x</sub> limitations were applied through NSR evaluations but were superseded by the subsequent NSR evaluations of applications 2105 and 2106. Streamlining for these limits is not necessary.
- 1) B-2A/B: 0.060 lb/mmBtu and 3.64 lb/hr
  - 2) B-62A/B: 0.18 lb/mmBtu
  - 3) B-102A/B: 0.090 lb/mmBtu and 7.25 lb/hr
  - 4) B-504: 0.125 lb/mmBtu
21. The steam production limitations of conditions III.B.6&7 are intended to achieve the following two goals: (a) the maximum total hourly steam production should not exceed 170,000 lb/hr and (b) the annual average steam production of the refinery main steam plant (B-504 & 506) should not exceed 80,000 lb/hr. These limits originated from the 1986 Platform Irene modifications and are intended to allow flexibility of steam production while not allowing a net increase in steam production emissions. There is no overriding federal requirement for these limits and they are, therefore, applied as District-only.
- a. If the calciner waste heat boiler is producing steam at 80,000 lb/hr or more, the main refinery steam plant cannot exceed 80,000 lb/hr when averaged over 24 hours (e.g., when the waste heat boiler is producing 90,000 lb/hr, the B-504&6 are limited to 80,000 lb/hr).
  - b. If the waste heat boiler produces <80,000 lb/hr, the steam plant can produce >80,000 lb/hr but the combination of the two plants still cannot exceed 170,000 lb/hr on a per hour basis (e.g., B-504&6 can produce 100,000 lb/hr if the waste heat boiler is only producing 70,000 lb/hr).
  - c. The main steam plant annual average production cannot exceed 80,000 lb/hr but that amount produced while the waste boiler is off-line need not be included in the calculation (e.g., if 336 E6 lb-stm produced by B-504&6 over 200 days while calciner waste heat boiler was on-line, average steam production would be in compliance at  $336 \text{ E6} / 200 / 24 = 70,000 \text{ lb/hr}$ ; note that B-504&6 steam production during the 165 days the calciner was off-line is not included in average).
22. The B-602 incinerators are not subject to the requirements of Rule 404.B.1 or 40CFR60 subpart J because the sulfur recovery plants are not considered to have been modified with the installation of their third Claus stage. See Unocal's letter of 7-19-91 and the District's letter of 7-17-91 in attachment C. In addition, the B-602s are not subject to SIP Rule 114 because they are exempt as "scavenger plants" under section 114.1.c.

23. The B-504 boiler A/C was issued 12-23-83 and it was installed soon after. That unit is not subject to the 6-19-84 applicability date of 40CFR60 subpart Db.
24. Permit Fees. Unocal has previously paid permit evaluation through April 1, 1997. Tosco will be invoiced at the prevailing District hourly rate for the remainder of the time it takes to issue this permit. Unocal has also previously paid permit renewal fees at various times during this last 36 months. These fees will be applied on a prorated basis, as determined in Attachment B to this evaluation, to the initial Title V fees due.
25. Process Flow Diagrams. See attachment D.
26. MACT Applicability to Tanks 900, 901, and 903. During the annual source test, Tosco will be required to substantiate their claim that the refinery MACT standard does not apply to the crude oil storage tanks. The required analysis in condition III.D.1.d for total HAP may be no greater than 4% wt. for tanks 900, 901, and 903 to not be subject to the MACT.
27. The tail gas unit TRS monitoring system does not include an oxygen monitor because that unit has consistently operated at zero percent O<sub>2</sub>. The relief from O<sub>2</sub> monitoring appears in 40CFR60.105.a.6.ii. Compliance with this relief is ensured through condition number III.D.3.e which requires that the TRS monitoring system sample point be shown to operate at 0% O<sub>2</sub> continuously for three days every three years when tail gas compliance testing is performed.
28. Condition III.C.5 concerning requirements common to domed and floating roof storage tanks shifts original PV valve permit conditions 7&8 of T-3031-A-2 to new process A-1. This is because the pressure-vacuum valves are felt to be associated more with the tank they are mounted on rather than the vapor recovery system they vent to.
29. Condition 8 to original permit U-3031-B-1, which required coke cooling water storage tank pH weekly, has not been included in the proposed permit. This requirement was imposed to investigate whether large changes in pH occurred in this system and, if they occurred, whether odor episodes resulted or not. The thought being that the solubility of odorous compounds might be affected by pH. The District agreed with Unocal, the operator at that time, to delete this condition after one year if no significant impacts or trends could be discerned. Indeed, a year's worth of monitoring has not shown any significant pH effects so this requirement will be discontinued.
30. Earlier drafts of the permit utilized compliances plans in the appendices to establish much of the detail of any given applicable requirement. An issue arose over the process which might be necessary to make revisions to those plans. The conclusion was the removal of all compliance plans from the permit which were not necessary to support an applicable federal requirement. The only plan found to be needed to support the permit was that for the 2,000



ppm SO<sub>2</sub> limit at the carbon plant kiln stack because this requirement resulted from a federally approved District enforcement action.

The removal of all other compliance plans from the permit necessitated the incorporation of their pertinent applicable federal requirements into the permit. However, it was not found necessary to include all underlying requirements. Specifically:

- a. Equipment and design requirements are not included except as they appear in the equipment description section of the permit. The applicable federal requirement equipment and design considerations are addressed in at the authority to construct stage and need not be included in the permit. For example: NSPS subpart QQQ requires that all drains utilize a water seal. This was assured through the authority to construct process and compliance is assured prior to the permit being issued. Therefore, it should not be necessary to specify that all drains have water seals when they already do have water seals.
  - b. Compliance options are not included. Only that method of compliance chosen as the normal operating procedure is included in the permit. Wherever an applicable requirement allows more than one option for compliance, the options not listed in the permit are considered to be still available to the source through the general requirement that they must comply with the applicable federal requirement. For example, NSPS subpart VV allows variations in the timing of leak inspections in section 60.483-2 if certain criteria are met. The source has not currently chosen this option so the requirements of how to qualify and the alternative leak detection frequency are not included in the permit. However, this option would still be available to the source under condition III.C.2.a which specifies that the source simply comply with subpart GGG which references subpart VV.
31. Concerning the inspection and maintenance program in NSPS subparts GGG&VV. The refinery has chosen the option in 40CFR60.483-1 to perform only annual leak checks on valves in gas or light liquid service. This requires that the percentage of leaking valves be maintained at less than 2 percent but relieves the refinery of most of the requirements of 40CFR60.482-7.

**VI. Conclusion and Recommendation.** In conclusion, the proposed Title V permit has been found to satisfy all of the requirements of District Rule 216 and the District's Title V permit program. Therefore, it is recommended that this permit be issued to satisfy those requirements.

David W. Dixon  
Supervising Engineer

Attachments:

- A - Completeness Evaluation
- B - Renewal Fee Proration Calculation
- C - Supporting Documentation
- D - Process Flow Diagrams
- E - Existing Condition to Title V Cross Reference and Determination of Federal-Enforceability
- F - Current Permits to Operate and Related Authorities to Construct
- G - Public Notice Text

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**Tosco Santa Maria Refinery, Application 2104**

**Attachment A**

**Completeness Evaluation**

**Tosco Santa Maria Refinery, Application 2104**

**Attachment B**

**Renewal Fee Proration Calculation**

**Tosco Santa Maria Refinery, Application 2104**

**Attachment C**

**Supporting Documentation**

**Tosco Santa Maria Refinery, Application 2104**

## **Attachment D**

### **Process Flow Diagrams**

**Tosco Santa Maria Refinery, Application 2104**

**Attachment E**

**Existing Condition to Title V Cross Reference and  
Determination of Federal-Enforceability**

**Tosco Santa Maria Refinery, Application 2104**

**Attachment F**

**Current Permits to Operate and  
Related Authorities to Construct**



**Tosco Santa Maria Refinery, Application 2104**

**Attachment G**

**Public Notice Text**